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APPLICATION

FOR UNITED STATES LETTERS PATENT

SPECIFICATION

TO ALL WHOM IT MAY CONCERN:

BE IT KNOWN THAT I, **MICHAEL E. ESPARZA**, a citizen of the UNITED STATES OF AMERICA, have invented a new and useful **GARAGE SCREEN DOOR SYSTEM** of which the following is a specification:



GARAGE SCREEN DOOR SYSTEM

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BACKGROUND OF THE INVENTION

Field of the Invention

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The present invention relates to screen door closures and more particularly pertains to a new garage screen door system for allowing air to flow into a garage while inhibiting foreign objects from entering while the garage door is in an open position.

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Description of the Prior Art

The use of screen door closures is known in the prior art. U.S. Patent No. 6,053,235 describes a device for positioning a screen door in the opening of a garage. Another type of screen door closure is U.S. Patent No. 6,098,698 having a screened enclosure being positioned in the opening of the garage to prevent insects from entering the open garage. U.S. Patent No. 4,712,598 has a screen curtain assembly coupled to the outside of the garage that is positionable over the opening in the garage to inhibit insects from entering the garage. U.S. Patent No. 4,231,412 has a screen door construction that is coupled to the garage for placement in the opening of the garage to inhibit insects from entering the garage. U.S. Patent No. 5,611,382 has a retractable screen assembly that is

coupled to the garage door and extends from the bottom of the garage door when the garage door is partially raised. U.S. Patent No. Des. 426,315 shows a free standing garage screen door.

5 While these devices fulfill their respective, particular objectives and requirements, the need remains for a system that has certain improved features allowing the screened door member to be selectively coupled to the garage door.

10 **SUMMARY OF THE INVENTION**

The present invention meets the needs presented above by providing a locking assembly for engaging the garage door so that the screen door member and the garage door can be move together.

15 Still yet another object of the present invention is to provide a new garage screen door system that inhibits insects from entering the garage while allowing air to flow freely through the garage.

20 Even still another object of the present invention is to provide a new garage screen door system that inhibits the entrance of insects around the screen door member.

25 To this end, the present invention generally comprises a screen door member comprising a plurality of panels. Each of the panels is hingably coupled to an adjacent one of the panels. The screen door member is designed for being positioned proximate a garage door whereby the garage door is positioned between the screen door member and the entrance to the garage when the garage door is in a closed position. The screen door member is designed for permitting air flow into the garage when the garage door is in an open position. A pair of track members are positioned on

opposing sides of the screen door member. Each of the track members engages a plurality of rollers rotatably coupled to the screen door member whereby the track members are for guiding the screen door member when the screen door is moved from a lowered 5 position to a raised position.

There has thus been outlined, rather broadly, the more important features of the invention in order that the detailed description thereof that follows may be better understood, and in 10 order that the present contribution to the art may be better appreciated. There are additional features of the invention that will be described hereinafter and which will form the subject matter of the claims appended hereto.

15 The objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure.

20 **BRIEF DESCRIPTION OF THE DRAWINGS**

The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such 25 description makes reference to the annexed drawings wherein:

Figure 1 is a rear view of a new garage screen door system according to the present invention.

30 Figure 2 is a front view of the present invention shown in use.

Figure 3 is a side view of the present invention.

Figure 4 is a side view of the locking assembly of the present invention.

5 Figure 5 is a cross-sectional view of the locking assembly of the present invention taken along line 5-5 of Figure 4.

Figure 6 is a rear view of the plate members of the present invention coupled to the garage door.

10 Figure 7 is a front view of the screen door member of the present invention.

Figure 8 is a cross-sectional view of the side sealing member and brush member of the present invention.

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DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference now to the drawings, and in particular to
20 Figures 1 through 8 thereof, a new garage screen door system embodying the principles and concepts of the present invention and generally designated by the reference numeral 10 will be described.

As best illustrated in Figures 1 through 8, the garage screen
25 door system 10 generally comprises a screen door member 11 comprising a plurality of panels 12. Each of the panels 12 is hingably coupled to an adjacent one of the panels 12. The screen door member 11 is designed for being positioned proximate a garage door whereby the garage door is positioned between the
30 screen door member 11 and the entrance to the garage when the garage door is in a closed position. The screen door member 11 is

designed for permitting air flow into the garage when the garage door is in an open position.

A pair of track members 13 are positioned on opposing sides
5 of the screen door member 11. Each of the track members 13
engages a plurality of rollers rotatably coupled to the screen door
member 11 whereby the track members 13 are for guiding the screen
door member 11 when the screen door is moved from a lowered
position to a raised position. At least one lifting handle 14 may be
10 coupled to the screen door member 11 to facilitate moving the
screen door member 11 from the lowered position to the raised
position

A locking assembly 15 is coupled to the screen door member
15 11. The locking assembly 15 is designed for selectively engaging
the garage door whereby the screen door is moved between the
lowered position and the raised positioned when the garage door is
moved between the closed position and the open position. The
screen door member 11 is designed for being moved independently
20 of the garage door when the locking assembly 15 is disengaged from
the garage door.

The locking assembly 15 comprises a latching portion 16 and
a bracket portion 17. The latching portion 16 is coupled to the
25 screen door member 11 whereby the latching portion 16 extends
through the screen door member 11. The bracket portion 17 is
designed for being coupled to the garage door. The latching
portion 16 selectively engages the bracket portion 17 whereby the
latching portion 16 is designed for securing the screen door member
30 11 to the garage door.

The latching portion 16 of the locking assembly 15 comprises a shaft member 18, a lock member 19 and a handle member 20. The shaft member 18 extends through the screen door member 11. The 5 lock member 19 is couple to the shaft member 18 whereby the lock member 19 is designed for being positioned between the screen door member 11 and the garage door. The handle member 20 is coupled to the shaft member 18 opposite the lock member 19. The lock member 19 selectively engages the bracket portion 17 for 10 securing the screen door to the garage door when the handle member 20 is actuated by the user.

The bracket portion 17 comprises a medial portion 21 and a pair of end portions 22. Each of the end portions 22 is oppositely 15 coupled to the medial portion 21. The medial portion 21 is designed for being coupled to the garage door. Each of the end portions 22 comprises a channel 23 whereby the channel 23 is designed for being positioned against the garage door.

20 The lock member 19 of the latching portion 16 is substantially S-shaped whereby opposing arms 24 of the lock member 19 are selectively inserted into the channels 23 of the end portions 22 of the bracket portion 17. The opposing arms 24 of the lock member 19 are designed for being secured between the end portions 22 of 25 the bracket portion 17 and the garage door for securing the screen door member 11 to the garage door when the user actuates the handle member 20 of the locking assembly 15.

30 The lock member 19 of the latching portion 16 comprises a pair of tabs 25. Each of the tabs 25 outwardly extends from an

associated one of the opposing arms 24 of the lock member 19. The tabs 25 of the lock member 19 are selectively inserted into a pair of slots 26 extending through the end portions 22 of the bracket portion 17 whereby the tabs 25 inhibit inadvertent disengagement of the lock member 19 from the bracket portion 17 when the opposing arms 24 of the lock member 19 are positioned in the channels 23 of the end portions 22 of the bracket portion 17.

The latching portion 16 of the locking assembly 15 comprises a biasing member 27. The biasing member 27 is positioned between the handle member 20 and a housing 36 of the latching portion 16 whereby the biasing member 27 biases the handle member 20 away from the screen door member 11 to keep the lock member 19 clear of the bracket portion 17 when the lock member 19 is disengaged from the bracket portion 17.

A plurality of brush members 28 are coupled to opposing side edges 29 of the screen door member 11. Each of the brush members 28 extends between the screen door member 11 and the track member 13 when the screen door member 11 is in the lowered position whereby the brush members 28 are designed for inhibiting foreign objects from entering the garage between the track members 13 and the opposing side edges 29 of the screen door member 11.

A plurality of side seal members 37 are coupled to the opposing side edges 29 of the screen door member 11. Each of the side seal members extends between the screen door member 11 and the associated one of the track members 13 whereby each of the side seal members 37 abuts the associated one of the track members 13 for inhibiting foreign objects from entering the garage between

the track members 13 and the opposing side edges 29 of the screen door member 11.

A flap member 30 is hingably coupled to a top edge 31 of the screen door member 11. The flap member 30 is designed for extending between the top edge 31 of the screen door member 11 and the garage, preferably at an angle of 45 degrees, when the screen door member 11 is in the lowered position whereby the flap member 30 is for inhibiting foreign objects from entering the garage between the garage and the top edge 31 of the screen door member 11.

A seal member 32 is coupled to a bottom edge 33 of the screen door member 11. The seal member 32 comprises a substantially flexible material, such as rubber. The seal member 32 is designed for being positioned between the screen door member 11 and a floor of the garage when the screen door is in the lowered position whereby the seal member 32 is for inhibiting foreign objects from entering the garage between the garage and the bottom edge 33 of the screen door member 11. A seal 39 is positioned between an upper most one of the panels 12 and an adjacent one of the panels 12 to inhibit debris and bugs from entering the garage between the associated panels 12 when the screen door member is in the closed position.

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Each of the panels 12 of the screen door member 11 comprises a plurality of mesh portions 34. The mesh portions 34 may also comprise a polarized design for limiting vision through the mesh portions 34. Each of the mesh portions 34 is positioned along a length of the associated one of the panels 12. Each of the mesh

portions 34 is designed for permitting air to flow in and out of the garage while inhibiting foreign objects from entering the garage.

An upper one of the panels 12 of the screen door member 11 being pivotal away from the track members 13 when the garage door is in the lowered position. A plurality of plate members 35 are designed for being coupled to the garage door whereby the plate members 35 are positioned between the garage door and the screen door member 11. The plate members 35 engage a plurality of wheel members 38 rotatably coupled to the upper one of the panels 12 of the screen door member 11 and force the upper one of the panels 12 back towards the track members 13 to prevent the garage door hooking the screen door member 11 and damaging the screen door member 11 when the garage door is being opened. A spring hinge member 42 is coupled between the upper most one of panels 12 and the adjacent one of the panels 12 whereby the spring hinge member 42 forces the upper most one of the panels 12 into the open position.

The screen door member 11 may have a plurality of sliding lock members 40. The sliding lock members 40 selectively engage the track members 13 to prevent the screen door member 11 from movement.

A plurality of stopper members 41 are coupled to the garage door whereby each of the stopper members 41 engage the screen door member 11 to inhibit the screen door member 11 from being raised when the garage door is in the closed position.

In use, the user actuates the handle member 20 of the latching portion 16 of the locking assembly 15 to disengage the screen door

member 11 from the garage door. The screen door can then be moved into the lowered position from the raised position to allow air to flow through the mesh portions 34 into the garage while still letting the person see out of the entrance into the garage and 5 keeping foreign objects, such as insects, out of the garage. The handle member 20 can then be actuated again when the garage door and the screen door member 11 are aligned to allow the to secure the screen door member 11 to the garage door and allow them the be moved together.

10 With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of the invention, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed 15 readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by the present invention.

20 Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable 25 modifications and equivalents may be resorted to, falling within the scope of the invention.